

Sep 23 04 04:33p

ROBERTS & ROBERTS, LLP

(609) 921-9535

P. 5

In the claims:

1. (Currently Amended) A process for producing a yarn suitable for tufting, said process comprising the steps of:
 - a. forming a bundle consisting essentially of a first base fiber, said first base fiber being selected from the group consisting of polyamides, polyesters, polyolefins, cotton and wool;
 - b. ring spinning or wrap spinning the bundle of fiber with a second fiber; said second fiber being twisted or wrapped uniformly around the bundle of fiber and consisting essentially of a blend of a second base fiber and a heat-activated binder material having a melting point lower than that of said bundle of fiber to form a yarn, said yarn comprising 0.1 to 12 weight percent of the binder material; the comprising a heat-activated binder material having a melting point range substantially below that of the base fiber to form a yarn, wherein said heat activated binder material has a melting point range of 105° to 190°C under ambient conditions, such that the second fiber is wrapped around or inserted into the bundle of first base fibers;
 - c. twisting two or more of the yarns to form a plied yarn comprising 0.1 to 12 weight percent of the binder material;
 - d. heating the plied yarn sufficiently to melt the binder material and causing the binder material to flow to intersecting points with the first base fiber; followed by
 - e. cooling the plied yarn to solidify the binder material to thereby encapsulate and bind the first base fiber and retain the twist in the plied yarn.
2. (Original) The process of claim 1 wherein said heating step occurs during twist setting of the plied yarn.
3. (Original) The process of claim 1, wherein the bundle of fiber is formed by spinning staple fiber.
4. - 13 (Canceled)

Sep 23 04 04:33p

ROBERTS & ROBERTS, LLP

(609) 921-9535

P. 6

14. (Previously Presented) The process of claim 1 wherein the base fiber is nylon-6 having melt point range of 215 to 225°C.

15. (Previously Presented) The process of claim 1 wherein the bundle consisting essentially of a first base fiber is selected from the group consisting of a sliver and a bundle of continuous filaments.

16. (Previously Presented) The process of claim 1 wherein said first base fiber is a polyamide selected from the group consisting of nylon-6 and nylon-6,6.

17. (Previously Presented) The process of claim 1 wherein said second fiber comprises a copolyamide.

18. (Previously Presented) process of claim 1 wherein said second fiber comprises a copolyamide of nylon 6/nylon 6,6 or nylon6/nylon 6,6/nylon12.

19. (Previously Presented) The process of claim 1 wherein said first base fiber is a polyamide and said second fiber comprises a copolyamide.

20. (Previously Presented) The process of claim 1 wherein said first base fiber is a polyamide selected from the group consisting of nylon-6 and nylon-6,6 and wherein said second fiber comprises a copolyamide of nylon 6/nylon 6,6 or nylon6/nylon 6,6/nylon12.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☒ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☒ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.